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# **SAND HILLS STATE FOREST PROVIDES MULTIPLE BENEFITS**

## **DESCRIPTION AND HISTORY**

The Sand Hills State Forest, located in Chesterfield and Darlington Counties, consists of 92,000 acres of infertile light sand deposited by a prehistoric sea.

During the years 1935-1939 the federal government purchased this area from many local landowners as a relief measure under the Resettlement Administration. These former landowners were resettled on more fertile land elsewhere.

The South Carolina State Commission of Forestry entered into an agreement with the U. S. Department of Agriculture in 1939. Although the area was later transferred to the U. S. Department of Interior, the original agreement was still binding. Under this agreement, half of the area was set up as a forest demonstration area to exemplify multiple-use management emphasizing timber production, research, wildlife and recreation. The other half of the area was established as the Carolina Sandhills National Wildlife Refuge operated by the U. S. Department of the Interior. It is operated primarily for over-wintering waterfowl. However, forest management responsibilities for the entire area were delegated to the S. C. State Commission of Forestry.

Because of its past treatment of raging wildfires, improper logging and poor farming practices, an intensive reforestation project was initiated. In conjunction with the reforestation effort, a wildlife management program was begun to improve habitat conditions. As a result of efforts in these fields, the once barren sand hills now support a large inventory of growing timber and large huntable populations of quail, deer, squirrel and doves, as well as a number of colonies of the endangered red-cockaded woodpecker.

The Sand Hills State Forest is a self-sustaining branch of the South Carolina State Commission of Forestry, operating entirely on receipts from the forest. One-fourth of all income generated on the area is paid to the counties in lieu of taxes. The remainder is used for further improvement of the area in reforestation, recreation and wildlife management, maintenance, etc.



## WILDLIFE AND FISH MANAGEMENT

In the early operation of the Sand Hills State Forest, most efforts in the wildlife field were directed toward protecting the few game animals which remained in the area. However, in the early 1960's the need for good public hunting and fishing areas prompted the South Carolina State Commission of Forestry to begin an intensive wildlife management program.

Unlike many similar projects, officials of the Sand Hills State Forest chose to build up wildlife populations by habitat improvement rather than by artificial stocking. To supplement the habitat created by wise timber management, hundreds of bicolor lespedeza patches have been established to provide food and cover for quail, and each year several hundred patches of rye and peas provide food for deer, doves, and songbirds. Additional acreages of brown-top millet, a favorite of mourning doves, are planted annually in several permanent wildlife fields and new clearings. Nesting boxes for summer ducks have been placed at pond heads.

Thirteen fish ponds, stocked with bass, bream and catfish have been constructed on the State Forest and are open to fishermen year-round. Fertilization in the summer and water-level regulation in the winter months help maintain the biological balance necessary for fish production. Several ponds on the wildlife refuge are open to public fishing under special regulations compatible with the waterfowl management program.

Hunting and fishing areas on the State Forest are open to the public. Open seasons and regulations for some game animals may be different for those statewide, because of special management considerations. A State Forest permit, available for a small fee, is required in addition to current state hunting or fishing licenses.

Agencies cooperating with the S. C. State Commission of Forestry on wildlife management and fish and game law enforcement are the S. C. Wildlife and Marine Resources Department and the U. S. Department of the Interior's Bureau of Sport Fisheries and Wildlife.





## **CLEARING AND PLANTING**

Nearly thirty million pine seedlings have been planted on more than thirty thousand acres of the Sand Hills State Forest since the late 1930's. Much of this land supported only stands of weed trees and a few scattered longleaf pines. To prepare the land for new stands of young, vigorous trees, the areas were first cleared of undesirable vegetation, then plowed and planted to slash, longleaf or loblolly pine seedlings. This method of reforestation not only creates easily managed timber stands, but produces valuable wildlife openings which stimulate the growth of small seed-bearing plants.

## **PRESCRIBED BURNING**

Since all trees shed some of their leaves each year, organic matter accumulates on the forest floor faster than it can be incorporated into the soil. This heavy blanket of leaves and needles not only creates a fire hazard, but retards the growth of small plants which produce wildlife food.

The most effective way of reducing this excess litter is by fire, prescribed and supervised by professional foresters. Prescribed burning is done under carefully selected weather conditions, usually during the winter, and only after adjacent areas have been protected by freshly plowed firebreaks. With forest fire suppression equipment standing by, the fire is set against the wind to create a slow, "backing" fire. This method of prescribed burning not only produces desired results, but minimizes the danger of fire damage.





## IMPROVEMENT THINNING

Like all living organisms, the need of trees change as growth occurs. Under natural conditions, growth will slow considerably until the strongest trees exert dominance and crowd out competing trees. Because this natural weeding-out process results in the death of suppressed trees, periodic thinnings are made to salvage the wood in these trees while it is still usable.

When foresters determine a thinning is needed, the stand is marked, using spots of paint to designate trees for removal. A record is kept of the number of trees marked and their diameter and usable height. From these figures an estimated volume is calculated. The timber is then sold to the highest bidder who is given a reasonable time to cut and remove it.

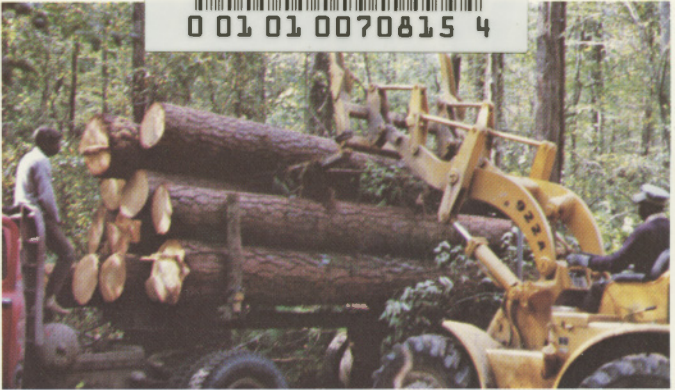
All logging operations on the Sand Hills State Forest are carefully controlled to avoid damage to soil, wildlife areas and remaining timber. Loggers are required to keep roads, fields, and firebreaks clear of brush and tree tops to facilitate easy access, especially for fire fighting equipment. Loading areas which will become wildlife food patches must also be cleared of trash and logging residue when the timber cutting operation is finished.







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## TIMBER HARVESTING

As a stand of timber approaches maturity, certain changes occur. These include reduced tree vigor and growth, and increased susceptibility to insects and disease. When thinnings will no longer improve the condition or stimulate a good growth rate of the better trees, the stand is considered "economically mature". Certain types of wildlife and recreation management may dictate a longer rotation.

Because southern pines require full sunlight to reproduce and grow, past stands were reproduced when the death or destruction of groups of older trees occurred and provided the necessary openings. The forest management program on the Sand Hills State Forest imitates nature's method of reproducing timber stands by clearcutting irregular blocks which blend well with nearby fields and wildlife food patches. Clearcutting should not be confused with destructive logging of trees and the abandonment of land they occupy. Clearcutting is the final step in the care of the old stand and the first step in establishment of a new stand. To keep aesthetic quality high, harvesting along heavily used roads is conducted to maintain an aesthetically pleasing view. Attractive hardwoods are protected.

## INCIDENTAL PRODUCTS

Longleaf pine needles, a highly desirable mulching material, are baled by contractors operating on the forest. As payment, a percentage of all needles baled is supplied to Forestry Commission forest tree nurseries for mulching seedbeds. In addition to providing a valuable product to the consumer, pine "straw" baling effectively supplements the prescribed burning program by reducing the fire hazard.

"Lightwood" or "fat" pine is produced when the heartwood of a longleaf pine becomes saturated with resin. Lightwood is found in old tree stumps scattered throughout the longleaf pine range. In recent years many longleaf pine stumps have been harvested. Distillation of these stumps yields over two hundred products including pine oil, turpentine and gunpowder components.

Blackberries and blueberries grow on most areas of the Sand Hills State Forest. Many local citizens pick these berries during late June and early July for pies, jams and jellies.

In keeping with the S. C. State Commission of Forestry's policy of protecting and enhancing environmental quality in its management of woodlands, the multiple use concept provides for timber production, grazing, fish and wildlife, air, water, soil, recreation, aesthetics, scenic beauty and environmental quality. This does not imply that all uses must coexist at the same time on a given acre. Often one use must dominate while others are subordinated. Sustained yield of multiple use products and services insures high level production of these various resources without reducing the productivity of the land.



## RECREATIONAL OPPORTUNITIES

Sugar Loaf Mountain, a traditional gathering place for over a century, is maintained on Sand Hills State Forest as a family recreational area.

Known locally as "The Mountain", Sugar Loaf is an unusual geological phenomenon towering a hundred feet above the surrounding terrain. Composed of sand, it was at one time capped with ferrous sandstone, much of which has now weathered away. Vegetation on the mountain is also quite unusual for this area. It includes mountain laurel and the diminutive pixie moss.

Quiet shady seclusion, rustic stone and timber picnic shelters, a fishing lake and nature trail combine with this unique geological formation to make Sugar Loaf one of the most popular recreation areas in the sand hills region. Camping and fishing facilities are offered at Lake Bee by the Bureau of Sport Fisheries and Wildlife of the U. S. Department of the Interior.

Opportunities abound for other forms of recreation such as bird watching, nature study and hiking. Visitors are welcomed and encouraged to avail themselves of the services offered by the Sand Hills State Forest.

### For additional information contact:

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